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Lebanon Water and Wastewater Sector Support

QUARTERLY REPORT: OCTOBER 2013 — DECEMBER 2013

January, 2014

This publication was produced for review by the United States Agency for International Development. It was prepared by DAI.

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Program Title:	Lebanon Water and Wastewater Sector Support Program
Sponsoring USAID Office:	Lebanon Mission
Contract Number:	EPP-I-00-04-00023-00/04
Contractor:	Development Alternatives, Inc. (DAI)
Institutional Subcontractors:	CDM Smith Allied Business Advisors (ABA) Emerging Markets Group (EMG) Valu Add Management Services KREDO Environment Management Co. (EMC)
Date of Publication:	January 2014
Author:	LWWSS team

The views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

ACRONYMS

ACWUA	Arab Countries Water Utilities Association	HDSL	High-bit-rate Digital Subscriber Line
ADSL	Asymmetrical digital subscriber line	HPIP	High Priority Intervention Program
AFD	French Development Agency	HR	Human Resources
AWP	Annual Work Plan	H&S	Health and Safety
APP	Annual Work Plan	IAR	Initial Assessment Report
ATP	Annual Training Plan	IEE	Initial Environmental Evaluation
BMLWE	Beirut-Mount Lebanon Water Establishment	IFI	International Financial Institution
BOQ	Bill of Quantities	IRG	International Resource Group
BWE	Bekaa Water Establishment	IRM	Information Resources Management
CAS	Central Administration of Statistics	IT	Information Technology
CCN	Cooperating Country National	IWRM	Integrated Water Resource Management
CCTV	Closed Cable Television	KPI	Key Performance Indicator
CDG	Chairman and Director General	LWWSS	Lebanon Water and Wastewater Sector Support
CDM	Camp, Dresser and McKee Engineering	MIS	Management Information System
CDR	Council for Development and Reconstruction	MMS	Maintenance Management System
CRM	Customer Relations Management	MOEW	Ministry of Energy and Water
CIP	Capital Improvement Plan	MOF	Ministry of Finance
CO	USAID Contract Office	MOTGE	Mise en place des Outils Techniques de Gestion de l'Eau
COA	Chart of Accounts	NLWE	North Lebanon Water Establishment
CQCP	Construction Quality Control Plan	NRW	Non Revenue Water
CSR	Customer Service Representative	NWSS	National Water Sector Strategy
COP	Chief of Party	O&M	Operations and Maintenance
COR	Contract Officer Representative	PMP	Performance Monitoring Plan
DG	Director General	PSP	Private Sector Participation
DAI	Development Alternatives Inc.	PPM	Parts per million
DCOP	Deputy Chief of Party	PPP	Public Private Partnership
DEP	Design Engineering Partners	SCADA	System Control and Data Acquisition
EIB	European Investment Bank	SLWE	South Lebanon Water Establishment
EU	European Union	SMP	Subcontractor Management Plan
EA	Environmental Assessment	SOW	Scope of Work
EDL	Electricite du Liban (National Electricity Provider)	STTA	Short-Term Technical Assistance
EMMP	Environmental Monitoring and Mitigation Plan	TBC	To be confirmed
ERP	Enterprise Resource Planning	TOR	Terms of Reference
EOI	Expression of Interest	USAID	United States Agency for International Development
FAS	Financial & Accounting System	USG	United States Government
GA	Geographical Area	WE	Water Establishment
GIS	Geographical Information System	WET	World Engineering and Technology
GIZ	Gezellshaft fur Internationale Zusammenarbeit	WPS	Water Pumping Stations
GNSS	Global Navigational Satellite System	WWTP	Wastewater Treatment Plant
GOL	Government of Lebanon		
GTZ	German Technical Assistance		

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A. INTRODUCTION

The Lebanon Water and Wastewater Sector Support (LWWSS) Program is a \$34 million, 67-month (October 2009 - April 2015) program funded by USAID and implemented by Development Alternatives, Inc. (DAI). LWWSS provides technical assistance and related services to impact USAID/Lebanon's Assistance Objective (AO) 4, "Improved water services for all in Lebanon," and the corresponding Intermediate Results (IRs), "More efficient management of water resources," "Improved water infrastructure," and "Enhanced water governance."

LWWSS works in cooperation with the Ministry of Energy and Water (MOEW) to assist Lebanon's four Water Establishments (WEs) in strengthening their capacity to deliver high-quality and sustainable services. Ultimately, the LWWSS program aims to help the WEs advance towards financial and operational sustainability and overcome the many challenges they face, including staff shortages and an aging workforce, poor customer relations, low tariffs that fail to recover operating costs, lack of metering, excessive non-revenue water, and underinvestment in the water and wastewater infrastructure.

The areas of focus that LWWSS targets in working with the WEs include:

- Building management capacity within the WEs;
- Increasing financial management capacity and financial system integration;
- Procuring equipment to complement technical assistance and capacity building;
- Business planning to increase capital planning and benchmarking capacity;
- Funding urgent infrastructure works to enhance delivery or access and coverage; and
- Developing a corporate culture, customer service orientation, and public outreach programs.

Based on the initial LWWSS program objectives of building on previous USAID and other donor program progress, and as a result of lessons learned during the past four years of the program, LWWSS has focused on implementing its Year-Five Work Plan within specific areas of Water Establishment (WE) operations. The LWWSS program has, therefore, tailored the individual WE work plans to apply the information gathered on each WE and to leverage the successes accomplished to date.

This Quarterly Report covers the period from October 2013 – December 2013 and provides quarterly highlights, component updates that provide technical perspective, and detailed progress of project activities broken down by each WE and then further by each component, as per the Year Five Work Plan. Each component consists of several activities, and progress of each is depicted in the accompanying Gantt charts and detailed in the narrative.

B. QUARTERLY ACTIVITY HIGHLIGHTS

USAID builds the capacity of 82 operators from 48 South Lebanon Water Establishment Pump Stations in source metering



Above and below: In-class and practical training sessions



USAID's LWWSS project implemented training on Source Metering for the South Lebanon Water Establishment (SLWE) on September 23, 24, and 25, 2013. This three-day training consisted of six consecutive sessions conducted at the SLWE branches: Saida, Jezzine, Marjeyoun-Habaya, Al Nabatieh, Al Zahrani, Tyr, and Bent Jbeil.

The training aimed to build the capacity of a metering team consisting of 82 operators from 48 Pump Stations in Mechanical Flow Meter, Solar Ultrasonic Flow Meter, and pressure gauge reading and record keeping procedures.

The training will maximize the impact and sustainability of the source metering installation activity, under which the LWWSS program is completing the installation of approximately 200 source meters in 185 locations in South Lebanon. Both source metering and meter reading will lay the foundation for the SLWE for knowing the current performance of the water sources, tracking production over time, and achieving water balance through informed decision-making. To ensure sustainability, the LWWSS program will support the SLWE team in meter reading for one year post installation.

USAID builds the capacity of 16 employees at the North Lebanon Water Establishment on the operation and maintenance of electrical generators



USAID's LWWSS project completed the Operations and Maintenance training for the North Lebanon Water Establishment (NLWE) between November 25 and November 28, 2013. The training was attended by 16 NLWE employees and consisted of three sessions.

The supply of power generation equipment for key pump stations in NLWE is one of the most crucial capital investments identified by NLWE. It will enable the WE to provide water supply to remote areas where power is unstable and cuts are frequent.



NLWE relies on stand-by generators in key stations that help maintain 24-hour supply to Tripoli, and to provide back-up power supply to those stations that are located far from stable power supply. In the latter case, the generator power supply enables the pumping and distribution of water to thousands of users in rural, deprived areas of NLWE's territory.

The provision of power generation equipment will result in an increased water supply to high density urban areas within the capital of North Lebanon (Tripoli) and to some of the villages most in need of water.

Inauguration of Zahle water testing laboratory



Minister Bassil delivering his speech in the inauguration ceremony

In previous years, USAID upgraded the Bekaa Water Establishment (BWE) water testing laboratories, whereby essential equipment was provided to enable the basic water testing operations to proceed. User training on equipment operation was conducted, as well as a short general training on water testing. During Year Four, the program procured and installed additional equipment, conducted rehabilitation work in the lab, and provided user training, accessories, and consumables for a period of one year.



Minister Bassil, LWSS COP Bill Parente, DG Mousallem and others cutting the ceremonial ribbon at the Zahle laboratory

On December 13, 2013, the Minister of Energy and Water, Gebran Bassil, in the presence of other ministers, government officials, and dignitaries from the area, inaugurated the Zahle water testing laboratory. The event took place at Zahle's lab, the WE's customer service center and Zahle's chamber of commerce building. The Minister congratulated Director General (DG) Mousallem and BWE employees and endorsed them to continue their hard work to provide better services and meet the customers' satisfaction. Mr. Bassil thanked USAID for their help and support and regretted the absence of the US ambassador.



Minister Bassil and DG Mousallem at the Zahle customer service center

Project Progress by Water Establishment and Component

Project activities are broken down by each WE and then further by each LWWSS component, in conformance with the Year Five Work Plan. Each component consists of several activities, and progress of each is depicted in the Gantt charts and detailed in the narrative.

1. Bekaa Water Establishment

Component 2: Capacity Building for Managerial, Technical and Operational Efficiency

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
2.2	Building the WEs' Water Quality Management Capacity: Water Quality Testing Plan	AUB	Activity completed	
2.3	Capacity Building in Operation and Maintenance of Pump Stations	KREDO	Activity completed	
2.4	Public administration and Process Management Training		Activity to be completed	June 2014
2.4.2	Public administration and process management training aiming at increasing staff familiarity with WE systems and processes	- LWWSS (MK), ABA (MC)	Activity to be completed	June 2014
2.5	Training on Network Maintenance and Repair			
2.5.1	Basic training on network maintenance, monitoring and repair, for existing and newly recruited network team personnel	- LWWSS (MK) - KREDO	Activity completed	December 2013

Personnel: BG-Bassem Ghayda; MK-May Koleilat; GT-Gulnard Ters; MC-Mike Chalah

Below we provide additional context for selected activities presented in the table above.

Activity 2.4 - Public Administration and Process Management Training

This training aims to familiarize the new members in BWE with some of the most basic regulations associated with process management within their departments.

The LWWSS team conducted the needs assessment for the training, selected the participants and grouped them by modules. The training was scheduled to take place in the first half of 2013. However, the new BWE recruits who passed the Civil Service Board exams were not hired until July 2013, which delayed the implementation of the activity.

The Public Administration and Process Management Training will be conducted by the LWWSS Financial and Training Specialists during the third quarter of Year Five. By then, the staff will be more

available as BWE would have completed the closing procedures of the fiscal year which usually take place in February and extend into March.

Note that, during the first quarter of Year Five, new staff were not working since they had not yet been allocated computers. As such, it seemed premature to do the training; it would not have been very effective.

Activity 2.5 - Basic training on network maintenance, monitoring and repair, for existing and newly recruited network team personnel

This activity relates to training for network repair operators at BWE, covering basic maintenance and repair of drinking water distribution pipes and connections, and health and safety practices.

In October, the BWE DG confirmed the participants' lists, venue, and training start date. Accordingly, the first session of the training was held in Baalbeck between October 22 and November 7, 2013. It was attended by 20 participants.

The second session started on November 19, 2013 and finished on December 5. The session comprised of four days classroom training and two days on-site training (November 21 and 26). USAID and Social Impact (SI) personnel attended the second site visit and three class room lectures. Upon SI's recommendation, a post-assessment was conducted on the last day of the training.

Component 3: Increase Financial and Commercial Viability of Water Establishments

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
3.1	Upgrade Finance and Accounting Standards and Methods			
3.1.5	Develop procedures and a standard manual for yearly budgeting within the WE, and conduct applied training to key departments.	ABA (AA, MC)	Procedures defined, manual produced, training conducted.	September 2014
3.1.6	Develop procedures and a standard manual for internal audit within the WE, and conduct applied training to key departments.	ABA (AA, MC)	Procedures defined, manual produced, training conducted.	February 2015
3.2	Integrate the WEs Financial, Accounting, Customer Service and Business Process Systems: The Enterprise Resource Planning (ERP) Platform		See below	
3.2.4	Conduct training, assist in transition phase and provide one year on-site support	ABA (MC) EDM	Activity completed	December 2013

Personnel: AA-Ahmad Azzam; MC-Mike Chalah

Below we provide additional context for selected activities presented in the table above.

Activity 3.1 – Upgrade Finance and Accounting Standards and Methods

3.1.5 - Develop procedures and a standard manual for yearly budgeting within the WE, and conduct applied training to key departments

As per the Year Five work plan, LWWSS' Financial Specialist Mike Chalah and subcontractor ABA will work on a Budget Manual for BWE.

This activity is replicated from the Beirut-Mount Lebanon Water Establishment (BMLWE) activity that was successfully implemented in Year Four. It aims to enhance and standardize the budget preparation procedure, by introducing a new culture in BWE that will improve the use of budgeting as a planning and control tool, and will provide BWE's key staff with a step by step guide on how to plan, prepare and implement the budget to improve planning and operations.

Implementation of the Budget Manual will start in January 2014 and is expected to be completed by end of September, 2014. LWWSS will provide training for ten employees from BWE who are working in the finance and budget department.

3.1.6 - Develop procedures and a standard manual for internal audit

As per the Year Five work plan, LWWSS' Financial Specialist Mike Chalah and subcontractor ABA will assist the BWE in developing a thorough Internal Audit Manual that will cover all aspects of audit controls dictated by the by-laws and the legislation applicable to the WEs, in order to improve detective, corrective, and preventative controls within the WE. The effort would also allow the WE to conduct an operational review of performance on a yearly basis, thereby providing the WE management with powerful tools to monitor the WE's performance and compliance. As part of this activity, LWWSS and BWE will work to assign staff to lead the process of internal auditing and conduct comprehensive training on the manual's contents and processes.

This activity will be replicated from the NLWE activity that was successfully implemented in Year Four.

The Manual will be implemented in the second quarter of Year Five and is expected to be completed during the fourth quarter, after which training for the BWE financial department employees will be conducted.

Activity 3.2 - Integrating the WE's Financial, Accounting, Customer Service and Business Process Systems

Enterprise Resource Planning (ERP) System Progress

During October, the LWWSS Financial Specialist and Engineering Design & Manufacturing (EDM) conducted site visits to the BWE to perform audits and met regularly with the BWE DG to brief him on the progress. The fully functional modules are: procurement, budget, accounting, inventory, human resource, documentation and registration, and share points. These modules were used by the staff for data entry but the reports were not being generated by the users during the reporting period. The remaining modules include: payroll, billing and collection and CRM. The CRM system, although operational and generating reports, faces issues related to the subscriber file, which is causing discrepancies in the reconciliation between their existing system and the ERP. EDM is working on the data migration with the BWE IT department for solving the problem.

The LWWSS program also provided a comprehensive training and finalized field adoption training (for the original BWE), commissioning, and started training the new staff, as well as continuing preparations for sign-off. The LWWSS team sent DG Mr. Mousallem an official letter, on December 9, requesting the BWE official acceptance or feedback on the operation of the ERP modules.

On-site support was supposed to be completed by September 2013; however, due to higher funds demand on the ERP for BMLWE, there were insufficient funds in EDM's subcontract to finalize support to BWE. After receiving CO approval to increase the ceiling of the EDM contract, the EDM subcontract was modified and extended until the end of December 2013, with the understanding that BWE will fund the maintenance and service agreements beyond the LWWSS program's activity completion. To this effect, a verbal request was made by the DG of BWE for the extension of the support and maintenance contract for an additional year, until December 2014. The official request is expected in January 2014 and the LWWSS program will consider the request at that time.

Challenges

Existing staff at BWE working on the ERP system have not been cooperating much with the new recruits. The LWWSS team raised the issue with the DG, and sent a memo on October 14. It was suggested that the DG circulate an internal memo to encourage personnel to provide him with weekly reports for a closer follow up. The issue will take some time to be resolved.

Another challenge is assigning computers to the new staff to work on. Again, this is a problem that has to be resolved by BWE senior management. The LWWSS team on the ground is supporting where possible.

Component 4: Capital Investment Planning and Program/Project Management

Work Plan Activity

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
4.4	Master planning		See below	
4.4.1	Water Supply and Sewerage Master Plan	LWWSS, KREDO, Valuadd	Activity to be completed	August 2014

Below we provide additional context for selected activities presented in the table above.

Activity 4.4 - Developing Water Supply and Sewerage Master plan

On November 19, 2013 the subcontractor, KREDO, submitted the revised version of the Wastewater System Assessment Report. To a large extent, KREDO incorporated most of the comments and suggestions raised by LWWSS's engineering team. The revised version of the Wastewater System Assessment Report gives a more quantitative "picture" both in tabular form and in graphic form of the current situation, including graphic representations of:

- Number/Percentage of municipalities/villages that have sewers;

- Number/Percentage of population connected to sewers;
- Number/Percentage of population connected to sewers that flow to Wastewater Treatment Plants (WWTPs); and
- Capacity of current operating WWTP's actually being utilized in volume and percentage.

The Water Supply Assessment Report is expected to be submitted by KREDO in January 2014. Due to circumstances mostly beyond its control, such as lack of data (or when available, incomplete or outdated) whether from the concerned municipalities, the Central Administration for Statistics or the BWE itself, as well as difficulty accessing certain areas of the Bekaa for security reasons, KREDO requested that they reschedule the submission dates for the remaining deliverables as follows:

Deliverable	New Due Date	Old Due Date
Water Supply System Assessment Report	22 January 2014	8 August 2013
Updated GIS Software and Current Data Base	8 February 2014 (no change)	8 February 2014
Irrigation Services Assessment Report	8 March 2014	8 November 2013
Wastewater Capital Inv. Plan & Priority Action Plan	8 April 2014	8 October 2013
TOR for Irrigation Systems Master Plan	8 May 2014	8 January 2014
Water Supply Capital Inv. Plan & Priority Action Plan	23 May 2014	8 October 2013
Final Master Plan	8 August 2014	8 April 2014

LWWSS management accepted the proposed schedule as this will not have an impact on the overall progress of the program. This will result in pushing out the activity end date to August 2014.

Component 5: Procurement of Technical Equipment to Strengthen WEs

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
5.4	Upgrading the Water Analysis Laboratories	MK	Activity completed	October 2013

Personnel: MK-May Kolehlat

Below we provide additional context for selected activities presented in the table above.

Activity 5.4 – Upgrading Water Analysis Laboratories

Lab Equipment

During September, all equipment and consumables were delivered to the newly rehabilitated laboratory in Zahle. On October 4, a preliminary visit was made to Zahle main laboratory to ensure that all

equipment is in place in preparation for the training. On October 9, the vendor Multilab delivered training on the newly acquired equipment for the ten laboratory staff.



Component 6: Small to Medium Scale Rehabilitation/Upgrade/Extension Water and Wastewater Works within WEs

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
6.1	Decreasing Water Losses and Upgrading Existing Networks			
6.1.1	Design network upgrades in Zahle: rehabilitating the water supply network of the region of Mar Elias	LWWSS (WA) Local Engineering Firm (W.E.T)	Design completed;	January 2013
6.1.2	Implement network upgrades in Zahle: rehabilitating the water supply network of the region of Mar Elias	Local Engineering Firm (W.E.T) Local subcontractor (Nicolas Srouji)	Activity to be completed	February 2014
6.1.3	Design network upgrades in Zahle: rehabilitating five branch networks	LWWSS (WA) Local Engineering	Activity to be completed	February 2014

	in Haouche el Oumara, Maalaka, Rassieh, Karak-Forzol and Midan	Firm (W.E.T)		
6.1.4	Implement network upgrades in Zahle: rehabilitating five branch networks in Haouche el Oumara, Maalaka, Rassieh, Karak-Forzol and Midan	Local Engineering Firm (W.E.T) Local subcontractor (Nicolas Srouji)	Activity to be completed	February 2014

Personnel: WA- Walid AbouZeid

Below we provide additional context for selected activities presented in the table above.

Activity 6.1 - Decreasing Water Losses and Upgrading Existing Networks

Work is progressing on schedule. Currently, the remaining house connections are being installed in different sectors of Zahle.

So far, the water lines have been installed in the following sectors:

- Midan I and II
- Rassieh I, II, III, and IV
- Mar Elias
- Maallaqa I and II
- Haouch el Oumara I, II and III
- Karak el Fourzol I, II, III and IV
- Dhour Zahleh

The house connections were completed in:

- Midan I and II
- El Rassieh I, II, III, and IV
- Haouch el Oumara I and II

Work is progressing in Mallaqa and Karak el Fourzol.

During the execution of the project, the works contractor proceeded ahead of schedule and was expected to finish the contracted works three months prior to the contractual deadline. The contractor executed the works in a systematic and timely manner, respecting both quality and high output level. Furthermore, detailed calculations were undertaken by the supervising consultant in September 2013, which revealed savings with respect to the original contract price. The reasons for the savings are two-fold:

- 1- The inclusion in the Bill of Quantities (BOQ) of a provisional sum of LBP 150,000,000, introduced in the RFP process for the purpose of covering additional unforeseen expenses which sometimes arise during the execution phase. Such a provision is usually inherent to all underground infrastructure projects, particularly in cases where subsurface conditions are not known or routinely checked by the water utility. After the contractor completed laying the main pipe lines, it became clear that this provisional sum would not need to be utilized.
- 2- Fluctuations in the actual executed quantities with respect to the quantities adopted in the BOQ, inherent to infrastructure projects, whereby the net result was a decrease by LBP 138,797,698

from the total contract price. This decrease was caused by an over approximation of the number of house connections during the design phase which would be required during construction. The number of house connections shown in the BOQ was derived based on the number of subscribers provided by the BWE. During the execution, it was revealed that the number of house connections is much lower because, in many cases, multiple subscribers are actually grouped into one single connection.

Given the savings mentioned above, the poor condition of the existing Zahle network, and in concert with USAID, consultations were held with the BWE DG to potentially identify additional lines that need urgent replacement. The supervising consultant, W.E.T, then submitted a cost estimate of the priority list, based on the contractual rates in the existing subcontract. Furthermore, the works contractor confirmed that the additional works could be completed by the contract end date (February 2014), with no need for extension of time.

The additional works would provide more than 4 kms of main pipeline, plus ancillary works, at no additional cost or time to the subcontract. They are in compliance with the BOQ rates and in line with the works already undertaken by the project, and the priorities of the BWE. Due to the fact that the contractor was already mobilized on site, works are expected to begin immediately so as to not incur new mobilization costs.

Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach

There are no component seven activities with BWE in the LWSS program Year Five work plan.

2. Beirut-Mount Lebanon Water Establishment

Component 2: Capacity Building for Managerial, Technical and Operational Efficiency

There were no component two activities with BMLWE in the Year Five work plan.

Component 3: Increase Financial and Commercial Viability of Water Establishments

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
3.1	Upgrade Finance and Accounting Standards and Methods			
3.1.5	Implement the yearly budgeting within the WE.	ABA (AA, MC)	Activity to be completed	September 2014
3.1.6	Develop procedures and a standard manual for internal audit within the WE, and conduct applied training to key departments.	ABA (MC, AA)	Procedures defined, manual produced, training conducted.	February 2015
3.1.7	Develop module and training on the cost Tariff Analysis Module	ABA (AA, MC)	Activity completed	October 2013

3.2	Integrate the WEs Financial, Accounting, Customer Service and Business Process Systems			
3.2.2	Implement software platform including Finance and Accounting System and Customer Relationship Management solution	EMC (MC), ABA EDM	- Activity completed	October 2012
3.2.3	Implement intranet system enabling web-browser based e-training, communication and business process tools	EMC (MC), ABA EDM	- Activity completed	March 2013
3.2.4	Conduct training, assist in transition phase and provide one/two year on-site support	EMC (MC), ABA EDM	- Activity completed	September 2013

Personnel: AA- Ahmad Azzam; MC-Mike Chalah. Resource: ABA-Allied Business Advisors

Below we provide additional context for selected activities presented in the table above.

Activity 3.1 – Upgrade Finance and Accounting Standards and Methods

3.1.5 - Develop procedures and a standard manual for yearly budgeting within the WE, and conduct applied training to key departments

By the time the final version of the Budget manual was officially delivered to BMLWE beginning October 2013, the financial department at the BMLWE had already completed the budget for 2014. Therefore the LWWSS program will support the BMLWE during the 2015 budget preparation phase. The training activity is expected to be carried out in accordance to the new budget manual in the third and fourth quarters of Year Five. Minimal tasks under this activity will be carried out prior to that.

3.1.6 - Develop procedures and a standard manual for internal audit

As described for BWE earlier, the Internal Audit Manual will be developed in the second quarter of Year Five and is expected to be completed during the fourth quarter, after which training for BMLWE financial department employees will be conducted. Minimal tasks under this activity will be carried out prior to that.

3.1.7 - Develop module, procedures and provide training on the Cost Tariff Analysis Module for Strategic Planning and Budgeting

The final version of the Cost Tariff manual was officially delivered to BMLWE early October 2013. Furthermore, based on discussions held with the BMLWE DG in September, the trained staff at the financial department will work on the Cost Tariff module on their own in a first phase to become familiar with the analytical tools. The implementation of the model will be followed up during Year Five, whereby the LWWSS program will support as needed the inputting of previous years' data into the module to test it. The LWWSS Program will also support the live implementation of the module during Year Five if requested by BMLWE. The Cost Tariff Analysis module could be connected to the ERP at a later stage after the BMLWE staff have become familiar with its applications.

Activity 3.2 - Integrating the WE's Financial, Accounting, Customer Service and Business Process Systems: Enterprise Resource Planning System

Work on this activity was concluded in the fourth quarter of Year Four .The LWWSS program fully deployed all the ERP modules on the BMLWE server. This involved all necessary steps and processes needed to get the new software and hardware up and running properly, including installation, configuration, running, customization to adapt it to the BMLWE environment, and testing. Moreover, the staff were trained (oftentimes more than once) and continuously supported until May 2013 by the LWWSS financial specialist and the EDM staff on site. What was not accomplished is the actual operation (go-live) of modules Documentation, CRM, and Billing and Collection, due to reasons explained in earlier reports.

On October 2, the LWWSS program received an official letter regarding the ERP acceptance sign off from the DG. The letter stated that BMLWE received a list of deliverables/modules, and that they would finalize the pending steps themselves. A Navision provider was to be hired for the maintenance and support services of the ERP system. The deliverables listed in this letter, however, fell short of the actual deliverables LWWSS deems necessary. A memo was sent to the USAID COR in that regard on October 17 containing all the details.

In November, BMLWE signed a yearly maintenance and support contract for the ERP system that would ensure its continuity and sustainability.

Component 4: Capital Investment Planning and Program/Project Management

There are no component four activities with BMLWE in the Year Five work plan.

Component 5: Procurement of Technical Equipment to Strengthen WEs

There are no component five activities with BMLWE in the Year Five work plan.

Component 6: Small to Medium Scale Rehabilitation/Upgrade/Extension Water and Wastewater Works within WEs

There are no component six activities with BMLWE in the Year Five work plan.

Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach

There are no component seven activities with BMLWE in the Year Five work plan.

3. North Lebanon Water Establishment

Component 2: Capacity Building for Managerial, Technical and Operational Efficiency

There are no component two activities with NLWE in the Year Five work plan.

Component 3: Increase Financial and Commercial Viability of Water Establishments

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
3.1	Upgrade Finance and Accounting Standards and Methods			
3.1.5	Develop procedures and a standard manual for yearly budgeting	ABA (MC, AA)	Procedures defined, manual produced, training conducted.	September 2014
3.1.6	Develop procedures and a standard manual for internal audit within the WE, and conduct applied training to	ABA (MC, AA)	Procedures defined, manual produced, training conducted.	February 2015

Personnel: AA-Ahmad Azzam; MC-Mike Chalah; MK-May Koleilat. Resource: ABA-Allied Business Advisors

Below we provide additional context for selected activities presented in the table above.

Activity 3.1. – Upgrade Finance and Accounting Standards and Methods

3.1.5 - Develop procedures and a standard manual for yearly budgeting within the WE, and conduct applied training to key departments

Implementation of the budget manual at NLWE will start in the third quarter of Year Five and is expected to be completed by February 2015. The process will include training for ten employees from NLWE working in the finance and budget department.

3.1.6 - Develop procedures and a standard manual for internal audit within the WE, and conduct applied training to key departments

Further to the Internal Audit Training implemented end of August 2013, the Internal Audit Manual was finalized based on participants' comments and delivered to the NLWE in September 2013. As a consequence, the NLWE financial department will start using the internal audit manual gradually during Year Five. As such, the LWWSS team will be providing support during all phases of the implementation in addition to providing the relevant departments with additional forms and templates. Implementation is expected to start at the end of the second quarter of Year Five.

Component 4: Capital Investment Planning and Program/Project Management

There are no component four activities with the NLWE in the Year Five work plan.

Component 5: Procurement of Technical Equipment to Strengthen WEs

Work Plan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Five	Target Date
5.2	Upgrading Pumping and Energy Efficiency			
5.2.3	Review and design the replacement of nine submersible pumps and associated works	- CDM Smith (BG, GT) - El-Ard	Tests completed and design produced	December 2013

5.2.4	Supply and install the replacement nine submersible pumps and associated works	- CDM (BG, GT) - Local subcontractor (TBD)	Activity to be completed	September 2014
5.2.5	Establish service agreements, and conduct user training programs for the above activities	- CDM (BG, GT, EH) -Local subcontractor (TBD)	Activity to be completed	September 2014
5.3	Increasing Supply Hours to Areas Facing Supply Shortage			
5.3.1	Supply and install up to 9 back-up generators for key NLWE stations	- CDM (BG, GT) - Local subcontractor (TBD)	Activity completed	September 2013
5.3.2	Establish service agreements and conduct user training program for these generators	- CDM (BG, GT), DAI (MK) - Local subcontractor (TBD)	Activity to be commenced	April 2015

Personnel: BG-Bassem Ghayda; GT-Gulnard Ters; MK-May Koleilat

Below we provide additional context for selected activities presented in the table above.

Activity 5.2 - Upgrading Pumping and Energy Efficiency

The LWWSS team is in the process of preparing the Scope of Work, Specifications, Drawings and BOQ. This will be followed by the launch of the procurement process expected in January 2014.

Activity 5.3 - Increasing Supply Hours to Areas Facing Supply Shortage

In September, the installation of gensets and all related equipment including but not limited to concrete pads, generators, sub-base fuel tanks, cables was completed for all stations.

During October testing and commissioning was completed as follows:

- Halba Department- Rahbe Pump Station Oct 7, 2013
- Qobayyat Department- Qobayyat Pump Station Oct 11, 2013
- Qobayyat Department- Kfartoun Pump Station Oct 21, 2013

A letter was sent early October to the NLWE DG in order to coordinate handover of the gensets. Hand-over of the generators was completed by the end of November to the NLWE. Hand-over committees, formed by the heads of NLWE Departments, visited the sites with the subcontractor EDAN Group and in the presence of the LWWSS supervising engineer and signed the hand-over certificates. The subcontractor will start the maintenance on the generator for a period of two years or 2,000 hours of operations under the close monitoring and supervision of NLWE and LWWSS engineers.

Hand-over details are as follows:

- Qobayat Department - Kfartoun pumping station: Genset 455 KVA on November 12, 2013
- Qobayat Department – Qobayat pump station: Genset 200 KVA on November 12, 2013
- Halba Department – Rahbe pump station: Genset 320 KVA on November 25, 2013
- Tripoli Department - Airouniyeh: Genset 400 KVA on November 25, 2013
- Tripoli Department - Hab water treatment plant: Genset 800 KVA on November 25, 2013
- Koura Department – Nakhle pump station: Genset 100 KVA on November 27, 2013
- Koura Department – Bqerqacha pump station: Genset 400 KVA on November 27, 2013
- Koura Department – Bechmizzine pump station: Genset 200 KVA on November 27, 2013

A three-day training on the operation of the generators was held between 25 and 28 November for 19 participants. The main objectives of this training were to teach the operators on each site the proper and safe use and operation of the generators, how to conduct routine maintenance, and how to diagnose and clear basic faults.

The LWWSS team is in the process of reviewing the O&M manuals and reports sent by EDAN Group. An official letter was sent to NLWE which included the above manuals and spare parts list and service agreement between DAI and EDAN Group for two years to acknowledge/accept the hand over.

Component 6: Small- to Medium-Scale Infrastructure Work

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
6.2	Expanding Service Provision to Non-Served Areas			
6.2.1	Beit Mellat, Akkar, North Lebanon: Design metered house connections to up to 12 villages	LWWSS (WA) KREDO	- Design completed	Jan 2014
6.2.2	Beit Mellat, Akkar, North Lebanon: Implement house connections to up to 12 villages	KREDO Local subcontractor (TBD)	- Procurement completed; Subcontractor appointed	April 2015

Personnel: WA- Walid AbouZeid-Infrastructure PM

Below we provide additional context for selected activities presented in the table above.

Activity 6.2 - Rehabilitation and construction of a water supply network in Beit Mellat region in Akkar for the NLWE.

Based on the changes in the scope of the work, two memos were sent to USAID (October 8 and 21, 2013) with explanation, justification and details for the revised nature of the work.

The LWWSS team is in the process of preparing the RFP for the rehabilitation and construction of a water supply network in Beit Mellat for the NLWE. The consultant KREDO worked on finalizing the design documents and it is expected that the procurement for the construction works will be launched during January 2014.

On December 19, KREDO submitted Revision 1 of the Detailed Design. This revision was reviewed, commented and discussed with KREDO on December 23 (and January 2). It is expected that KREDO will submit the final Design by the second week of January.

The timeline for this project is as follows:

Stage	Description	Completed By
Services Appointment	Appointment of consulting engineer. Environmental assessment and approvals.	February 2013

Stage	Description	Completed By
Investigation, Preliminary and Detailed Design, Tender Package	<ul style="list-style-type: none"> - Stage 1: Research, field investigation, assessment and detailed project definition stage. Project strategy defined and agreed. - Stages 2 and 3: Preliminary and detailed design stage, detailed costing and programming and phasing. Final design and scope parameters agreed and coordinated with NLWE; Production of a complete design package for review and approval by DAI and NLWE. - Stage 4: Following approval of the design package, production of tender drawings and preparation of a complete bid package for DAI to procure the construction works. 	10 months – Completed by January 2014
Procurement of Works	- Stage 5: Launching of Bid for works. Proposals received, evaluated and infrastructure subcontractor appointed.	2 months – Completed by March 2014
Construction, Completion and Commissioning	<ul style="list-style-type: none"> - Stage 6: Implementation of works until completion, commissioning and taking over. - In parallel: Capacity building to NLWE staff and outreach and community involvement activities, conducted by DAI and NLWE, to maximize the impact of the project. 	12 months – Completed by March 2015

Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
7.3	Develop Tools and Support WEs in Adopting Corporate Communication			
7.3.2	Hosting of NL WE Corporate Website	- Netways	Activity underway	April 2015

Below we provide additional context for selected activities presented in the table above.

Activity 7.3 – Designing and Implementing WE Corporate Website

Although the design work for the website is complete, NLWE have yet to actually launch the website. In discussions with the DG and the IT Staff, the LWWSS management urged them to launch the website before the end of the year, however they indicated they wanted more time to finalize the translations provided in the website (Arabic, French, and English). This has been one of the main challenges facing this activity - delay in getting NLWE feedback and sign-off on all stages of the website development, which has caused a delay in finalizing the activity. The LWWSS program repeatedly explained to NLWE that corporate websites are never 100% complete, and are living and evolving activities which are improved as they are used, and that it is imperative that the website be

launched as soon as possible, particularly in view of the fact that the hosting agreement is already running. LWWSS management will continue following up with NLWE on this subject.

4. South Lebanon Water Establishment

Component 2: Capacity Building for Managerial, Technical and Operational Efficiency

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
2.1	Establishing and Building the Capacity of Metering Teams			
2.1.1	Assist in identifying metering teams and assess training needs	- CDM (BG, GT, IN) - DAI (MK) - ValuAdd	- Activity conducted	September, 2013
2.1.2	Provide management team and field team training on metering	- CDM (BG, GT, IN) - DAI (MK)	- Activity conducted	September, 2013
2.1.3	Provide technical assistance (studies, training, study tours) and/or technological tools for water demand management	- DAI (TBD) - ValuAdd	- Activity conducted	September, 2013
2.3	Build Pump Stations Operators Capacity in Operation and Maintenance			
2.3.1	Pump station operators basic O&M and H&S training	- DAI (MK) - KREDO	- Activity conducted	October, 2013

Personnel: BG-Bassem Ghayda; GT-Gulnard Ters; IN – Ihab Nasr; MK-May Koleilat

Below we provide additional context for selected activities presented in the table above.

Activity 2.3 – Capacity Building in Operation and Maintenance of Pump Stations

Due to the large number of trainees, four Operation and Maintenance training sessions had to be planned with around 15 participants per class. As such, the four-day sessions conducted at a rate of two days per week started in August. In September, the second and third session were conducted. The final session was completed on October 10, 2013, and included two site visits. The session was attended by 18 participants.

Component 3: Increase Financial and Commercial Viability of Water Establishments

Work Plan Activities

Item	Activity Description	Program Resource	Outcome by End of Year Five	Target Date
3.1	Upgrade Finance and Accounting Standards and Methods			
3.1.5	Develop procedures and a standard manual for yearly budgeting within the WE, and conduct applied training to key departments.	ABA (AA, MC)	Procedures defined, manual produced, training conducted.	September 2014

3.1.6	Develop procedures and a standard manual for internal audit within the WE, and conduct applied training to key departments.	ABA (AA, MC)	Procedures defined, manual produced, training conducted.	February 2015
3.1.7	Develop module, procedures and provide training on the Cost Tariff Model for Strategic Planning and Budgeting	ABA (AA, MC)	- Module installed, connected to ERP - Procedures defined, training conducted.	June 2014
3.2	Integrate the WEs Financial, Accounting, Customer Service and Business Process Systems			
3.2.1	Conduct business process mapping	ABA (AA, MC)	Activity completed	December, 2013
3.2.2	Implement software platform including Finance and Accounting System and Customer Relationship Management solution	ABA (AA, MC), Local subcontractor (tbd)	Activity to be completed	September 2014
3.2.3	Implement intranet system enabling web-browser based e-training, communication and business process tools	ABA (AA, MC), Local subcontractor (tbd)	Activity to be completed	September 2014
3.2.4	Conduct training, assist in transition phase and provide on year on-site support	ABA (AA, MC), Local subcontractor (tbd)	Activity to be completed	February 2015

Personnel: MC-Mike Chalah; Ahmad Azzam

Below we provide additional context for selected activities presented in the table above.

Activity 3.1 – Upgrade Finance and Accounting Standards and Methods

3.1.5 - Develop procedures and a standard manual for yearly budgeting

As described for BWE above, implementation of the Budget Manual at SLWE will start in the third quarter of Year Five and is expected to be completed by February 2015, and will include training for 10 employees from SLWE working in the finance and budget department.

3.1.6 - Develop procedures and a standard manual for internal audit

As described for BWE above, the Internal Audit Manual will be implemented in the second quarter of Year Five and expected to be completed during the fourth quarter, after which training for BMLWE financial department employees will be conducted.

3.1.7 - Develop module, procedures and provide training on the Cost Tariff Analysis Module for Strategic Planning and Budgeting

The USAID-funded Lebanon Water Policy Program (LWPP) assisted the Lebanese WEs to prepare a cost tariff analysis module that BMLWE and SLWE used as a planning tool. This module was prepared based on the data for 2004 that was available at the time, and only limited updates were done to the module over the past years, due to the lack of accurate, dynamic and up-to-date financial data within each establishment.

As per the Year Five work plan, the LWWSS program will support SLWE in the implementation and proper use of the model. It will provide hands on training to the decision-makers and will create all needed reports for the optimal use of the model for planning and decision-making.

The Cost Tariff Analysis model will be composed of the following nine sections with Excel sheet templates linked to the ERP:

1. Assumptions
2. Scenarios
3. Consolidated results
4. Cost Recovery
5. Income Statements
6. Variable expenses
7. Main fixed expenses
8. Project expenses
9. General expenses

Work on this activity will start in the third quarter of Year Five.

Activity 3.2 - Integrating the WE's Financial, Accounting, Customer Service and Business Process Systems: The Enterprise Resource Planning (ERP) Platform

The implementation of the ERP in SLWE will include the following modules: Finance, Purchasing/Inventory, Human Resources and Payroll, Billing and Collection, CRM, and Documentation and Registration.

The services also include software updates, as well as full on-site and off-site service support for a period of one year. This activity is of primary importance to SLWE, and is included as a prerequisite for other high level reforms and initiatives within the WE's business plan.

The RFP was issued to seven interested bidders between October 2 and October 4, 2013. Out of these seven potential bidders, three submitted their proposals by the deadline of November 4, 2013. The proposals were evaluated by the evaluation committee in November. The technical evaluation resulted in two of the three bidders being technically accepted. The evaluation committee then opened the financial proposals and EDM was selected for having the highest combined total score and being the lowest bidder.

Following the completion of the procurement process and the selection of the awarded bidder EDM for the implementation of the ERP solution for the SLWE, the LWWSS team sent a request for consent to the CO around mid-December 2013. The team is also expecting the approval on the Information Resources Management (IRM) prepared and submitted to the ADS 548 team on December 17, 2014.

The subcontract agreement is currently under preparation and it is expected that the kick off meeting will be held at the office of the Director General (DG) of SLWE early January 2014 to start the implementation of this activity.

Component 4: Capital Investment Planning and Program/Project Management

There are no component four activities with SLWE in the Year Five work plan.

Component 5: Procurement of Technical Equipment to Strengthen WEs

Work Plan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Five	Target Date
5.1	Identifying Water Production and Contributing to Water Demand Management			
5.1.1	Supply and install production meters, fittings and protection box/manhole (all non-metered sources in WE)	- CDM Smith (BG, GT) - Modon Group	- Activity completed	September 2013
5.1.2	Establish service agreements, conduct training and complete meter reading	- CDM Smith (BG) - Modon Group	- Activity to be completed	September 2014
5.4	Upgrading Water Analysis Laboratories			
5.4.4	Conduct user training program on the atomic absorption instrument	- LWWSS (MK)	- training to be conducted on atomic absorption instrument	March 2014

Personnel: BG-Bassem Ghayda; GT-Gulnard Ters; IN – Ihab Nasr

Below we provide additional context for selected activities presented in the table above.

Activity 5.1 - Identifying Water Production and Contributing to Water Demand Management

Site inspection visits to all metered locations were completed. The LWWSS Program Engineers are in the process of summarizing results to be verified and confirmed with SLWE. 237 meters were purchased, 198 were installed, while 39 meters were stored in Saida warehouse as spare parts.

The activity continues post-installation and includes a year-long meter reading service by the supplier, in addition to warranty and service of supplied equipment. It is estimated that Task 5.1.2 of this activity (maintenance, warranty, and meter reading for a period of one year per completed site) will extend until September 2014.

The LWWSS team is following up closely with the subcontractor, Modon, and several meetings were held in December between the LWWSS team, Modon, and SLWE.

Activity 5.4 – Upgrading Water Analysis Laboratories

The Head of the SLWE laboratory, Mrs. Chidiac, continued implementing water analysis tests on the Atomic Absorption instrument with her team. She collected data in order to identify specific training needs for the testing. Ms. Chidiac also coordinated with the local supplier of the AA instrument to resolve some difficulties she is facing with the tests, as she and her team were not able to identify the proper methodology needed to conduct and analyse the tests. Once she is ready, the LWWSS program will organize the training with the manufacturer.

On December 12, a follow-up visit to Saida lab was done with the M&E specialist. A copy of the lab results was presented.

Accordingly the implementation of the training activity will be pushed to March 2014. LWWSS and SLWE will coordinate together to finalize the scope of work of the trainer. The AA supplier, NUMELAB,

will send an updated offer to the SLWE covering the fees of the trainer who is expected to come to Lebanon between the last week of February and the first week of March 2014.

Component 6: Small- to Medium-Scale Infrastructure Work

Work Plan Activities

Item	Activity Description	Program Resource	Deliverable by End of Year Five	Target Date
6.3	Pump Station Infrastructure Rehabilitation			
6.3.1	SLWE: Test and design pumps, motors and associated works for the rehabilitation of selected stations	- CDM Smith (and their subcontractor DEP)	Activity completed	February 2013
6.3.2	SLWE: Supply and install pumps, motors and associated works for the rehabilitation of selected stations	- CDM Smith - Local subcontractor (Al Rawan)	Infrastructure contract placed; works commenced	January 2015

Below we provide additional context for selected activities presented in the table above.

Activity 6.3 – Upgrading Pumping and Energy Efficiency

In November 2013, more construction submittals were received from subcontractor Al-Rawan for technical information, shop drawing, data sheets, etc. The main booster pumps were approved by LWWSS/CDM Smith and the pumps have been ordered by the subcontractor. Under full field supervision by the LWWSS team, Al Rawan proceeded with the construction activities in Ouadi Jilo and Batoulay, in accordance with the approved construction schedule. By the end of November, a major part of the civil works was completed on both sites. Civil works continued throughout December and are expected to continue during January.

Component 7: Corporate Culture, Customer Service Orientation, and Public Outreach

There are no component seven activities with SLWE in the Year Five work plan.

5. Study Tours and Conferences

There are no activities related to Study Tours and Conferences in Year Five.

C. COLLABORATION WITH DONORS AND GOVERNMENT OF LEBANON OFFICIALS

Donor coordination is an essential part of LWWSS project planning and execution in order to (1) avoid unnecessary duplication; (2) identify specific areas of coordination; and (3) identify areas where LWWSS can collaborate with other donors on specific projects or programs. The list of meetings and special events with the Government of Lebanon (GOL) and other donors below provides a clear picture of this important program activity.

Bekaa Water Establishment Donor Meeting for Refugee Crisis	December 3, 2013	DG; BWE; Representatives of many donor agencies; Rana Maalouf; Khalil Klink; Bill Parente	3rd Meeting to discuss possible donor interventions to assist BWE in dealing with influx of Syrian refugees
USAID Water Round Table Meeting at the WISE-L Project Office	December 12, 2013	Elisabeth Kvitashvili, DAA, USAID/W; David Schroder; Rami Wehbeh; Bill Parente; Jamal Krayem, DG; other GOL and project officials	Discussion on USAID's Assistance to the Water Sector in Lebanon. To hear input from Government clients and water practitioners
Inauguration of Water Testing Laboratory, Bekaa Water Establishment	December 13, 2013	Gebran Bassil, Minister of Energy and Water; Maroun Moussallem, DG, BWE; Bassem Ghayda, LWWSS; Bill Parente	Public event dedicating the new Water Testing Lab, with visit to the Customer Service Center, all projects supported by USAID
USAID Emergency Preparedness Planning Workshop	November 12, 2013	48 invited officials + Rana Maalouf, Bill Parente	Present the findings of USAID's Rapid Assessment Team re: Refugee Crisis
Meeting with South Lebanon Water Establishment, Saida	November 15, 2013	Ahmad Nizam, DG; Bassam Jaber, Bassem Ghayda, Rana Maalouf, Bill Parente	Periodic meeting to discuss project schedules and implementation details
Meeting with PMPL Social Impact	November 21, 2013	Harvey Herr, COP Najwa Andraos, SIO Rana Maalouf, Bill Parente	Discussion on impending mid-term evaluation of LWWSS by Social Impact
Performance Management Program of Lebanon (PMPL) at Social Impact Office	October 3, 2013	Harvey Herr, COP Najwa Andraos, SIO Joanna Khater, M&E Carine Khoury, M&E Kamil Wana, M&E Tamara N., M&E Nathalie Bavitch Bill Parente	Introductory meeting to discuss Social Impact's role in the PMPL project, M&E Plans, lines of communication, AIDTracker, and Midterm Evaluation of LWWSS
Meeting at USAID	October 18, 2013	Sana Saliba, Charbel Hanna, David Schoder, Rana Maalouf, Nathalie Bavitch, Kaitlin Asrow, Bill Parente	Routine project update meeting with the Contract Officer's Representative

BWE Coordination Meeting on Host Communities	October 22, 2013	Walid AbouZeid, Philip Giantris, BWE DG, UN and Donor organizations	Coordination meeting for host communities interventions in the water sector
35th Water Sector Coordination Meeting at EU	October 24, 2013	USAID, GIZ, UN agencies, ICRC, All major donors in the Water Sector	Monthly coordination meeting between donors and projects in the water sector
Meeting with North Lebanon Water Establishment	October 30, 2013	Jamal Krayem, DG Gaby Nasr, Head of Ops. Bassam Jaber, Rana Maalouf, Bill Parente	Introductory meeting for new COP; discussion on Beit Mellat; Pumps and Generators projects; Website startup

D. CONTRACT DELIVERABLES

- The September monthly report was submitted to the COR in October 2013.
- The October monthly report and the fourth quarter Year Four report were submitted to the COR in November 2013.
- The November monthly report was submitted to the COR in December 2013.

E. CHALLENGES, PROBLEMS, ISSUES

Lack of WE staff availability

The lack in availability of staff has always been a challenge within most WEs. Across all its components, the LWWSS program is focusing on assisting the WEs with appropriate employee placement and establishing training programs. For example, in Years Four and Five, the LWWSS program will assist BWE in allocating adequate roles and responsibilities of the 71 newly recruited staff and provide some of them with specialist training, to enable optimal use of resources.

Access to work sites based on security situation

Another challenge is the security situation in many areas of the country including the North Governorate, Saida, and the Bekaa, which is restricting the movement and on-site work in some activities. Details about impact are reported under each individual activity.

F. STTA DURING QUARTER

During this quarter the following personnel worked on LWWSS as STTAs:

Person and Subcontractor	Period of STTA	STTA Activity
Keith Hourihan, Internal Audit Manager , DAI/Bethesda	November 21- December 14, 2013	<ul style="list-style-type: none">• Assist LWWSS with USAI/Cairo finance team who wish to review voucher information.
Kaitlin Asrow, Project Associate, DAI, Bethesda	October 12- November 5, 2013	<ul style="list-style-type: none">• Support the COP in preparing for the final 12 months of the project• Assist with organizational and administrative issues
Raed Ghantous ,Project Manager, CDM Smith	Dec 1-12, 2013	Routine project supervision visit to check with CDM Smith team on South Lebanon Pump station Rehabilitation project and related activities.
Philip Giantris, Water utility specialist	October 21- 29, 2013	<ul style="list-style-type: none">• Review and consult on the BWE Master plan and the SLWE Source Meter Reading

G.MAJOR ACTIVITIES PLANNED FOR NEXT QUARTER

Bekaa Water Establishment

- Preparation of Public Administration Training (Component 2)
- Continuation of ERP support to BWE. There is a possibility to continue with the support and maintenance activities for another year. (Component 3)
- Investigate and design key best practices in budgeting .Draft Budget Manual and establish linkages with ERP (Component 3).
- Review BWE internal audit requirements and identify key best practices (Component 3)
- Water Supply and Sewerage Master Plan: Meeting with KREDO and Philip Giantris to assess the progress of KREDO (Component 4)
- Continuation of the Zahle network rehabilitation works: Completion of the House Connections in the whole project area providing support as needed (Component 6)

Beirut-Mount Lebanon Water Establishment

- Review WE audit requirement and define key best practices. (Component 3)

North Lebanon Water Establishment

- Follow up on the implementation of the Internal Audit Manual (Component 3)
- Start the procurement process for pump station rehabilitation (Component 5)
- Continuation of testing, commissioning, and handover of gensets (Component 5)
- Design and supervision of the rehabilitation of the water supply network in Beit Mellat: Submission by KREDO of the Detailed Design and the Tender Documents and initiate procurement process and site implementation (Component 6)
- Sign off of NLWE website (Component 7)

South Lebanon Water Establishment

- Review audit requirements and define key best practices (Component 3)
- ERP activity kick off meeting and beginning of the implementation phase (Component 3)
- SLWE Lab water analysis testing continued and implementation of the training activity (Component 5)
- Source meter reading support by subcontractor Modon (Component 5)
- Continuation of pump station rehabilitation work (Component 6)

H. ENVIRONMENTAL COMPLIANCE REPORTING

The LWWSS project Environmental Mitigation and Monitoring Plan (EMMP) details the project environmental compliance requirements, as well as including a list of reports for submission to USAID. The primary environmental compliance reporting tool is the Quarterly Report.

The LWWSS EMMP notes that an initial screening form must be completed for each project activity. If the activity is determined to be in category 2, 3, or 4, then an Environmental Review and Assessment Checklist (ERAC) and an Environmental Mitigation and Monitoring Plan (EMMP) must be completed and approved by the LWWSS COR.

Initial screening forms were completed for each activity (available in the files of the LWWSS Environmental Specialist), and it was determined that the activities under Components 5 and 6 all require ERACs and EMMPs. The first table below, entitled “LWWSS Environmental Compliance Overview,” summarizes the environmental compliance actions for each LWWSS activity. The second table below, entitled “LWWSS Environmental Mitigation and Monitoring Actions,” details environmental mitigation and monitoring actions for each activity that requires an ERAC and EMMP.

Environmental Compliance Table 1:

LWWSS Environmental Compliance Overview				
Activities (Completed, On-going and Planned)		Environmental Compliance Actions		
#	Activity Description	Has an initial screening form been completed?	As per the screening form, is an ERAC and EMMP necessary?	Is there an approved ERAC and EMMP (if applicable)?
Component 2				
2.1	Source metering training in SLWE	Yes, see activity 5.1	See activity 5.1	See activity 5.1
2.2	Water quality management in the Bekaa implemented by AUB	Yes	No	N/A
2.3	O&M trainings for pump station operators in BWE, NLWE, and SLWE	Yes	No	N/A
2.4	IT literacy training for BMLWE and BWE	Yes, see activity 3.1	No	N/A
2.5	Network maintenance and repair training for BWE	Yes	No	N/A

Component 3				
3.1	Upgrade finance and accounting standards and methods	Yes	No	N/A
3.2	ERP platform and associated activities	Yes	No	N/A
3.3	Pilot Stakeholder exercise to sustain O&M of USAID WWTP	Yes	No	N/A
Component 4				
4.1	Business planning for BMLWE and SLWE	Yes	No	N/A
4.2	Pump station inventory in South Lebanon	Yes	No	N/A
4.3	Water utility management: conferences, workshops, specialist trainings and study tours	Yes	No	N/A
4.4	Master planning for the Bekaa	Yes	No	N/A
Component 5				
5.1	Source metering installation and training	Yes	Yes	Yes
5.2.1-5.2.2	Jeita pump station rehabilitation	Yes	Yes	Yes
5.2.3-5.2.4	Pump station rehabilitation in North Lebanon	Yes	Yes	No – Submitted to COR for approval in Q2 of Y5*
5.3	Back-up power generators for NLWE pump stations	Yes	Yes	Yes
5.4	Upgrading water analysis laboratories in SLWE and BWE (Y3) and rehabilitation of laboratory and equipment purchases for BWE (Y4)	Yes	Yes	Yes for Y3 activities and Y4 activities
5.5	Customer Service Center in BWE	Yes	Yes	Yes
5.6	Upgrade IT equipment in BWE and SLWE	Yes	Yes	Yes for BWE and SLWE
5.7	GNSS procurement and training for SLWE	Yes	Yes	Yes
Component 6				
6.1	Network rehabilitation in Zahle (BWE)	Yes	Yes	Yes
6.2	Expanding service provision in Beit Mellat (NLWE)	Yes	Yes	No – Submitted to COR for approval in Q2 of Y5*
6.3	Pump station rehabilitation in South Lebanon	Yes	Yes	Yes

6.4	Chlorination systems installation and training	Yes	Yes	Yes
Component 7				
7.1	Building customer service management structure at BWE	Yes	No	N/A
7.2.1	Customer Service training at BWE and BMLWE	Yes	No	N/A
7.2.2	On-the-job training in communication planning	Yes	No	N/A
7.3.1-7.3.2	Design and implement WE brand identity guidelines and design and implement corporate website	Yes	No	N/A
7.3.3	Design and adopt customer service application forms	Yes	No	N/A
7.4	Customer satisfaction survey	Yes	No	N/A
7.5	Youth water conservation programs	Yes	No	N/A
7.6.1	Media campaign in the Bekaa	Yes	No	N/A
7.6.2	World Water Day 2012 youth outreach	Yes	No	N/A

ERAC = Environmental Review and Assessment Checklist

EMMP = Environmental Mitigation and Monitoring Plan

* = These EMMPs were originally planned to be completed during Year Four, but the activities were not finalized during Year Four. Therefore, the EMMPs will be finalized once the design, technical specs, and other requirements are finalized.

Environmental Compliance Table 2:

LWWSS Environmental Mitigation & Monitoring Actions		
Activity # (as per Y5 Workplan)	Activity Description	Environmental Mitigation and Monitoring Update (as of December 31, 2013)
5.1	Source metering installation and training	The ERAC and EMMP were approved by LWWSS' COR at the end of the third quarter of Year Three.
		An initial EMMP was included in the subcontract with Modon (signed in April 2012), the vendor that is supplying and installing source meters. A more detailed EMMP, as well as an environmental mitigation inspection checklist, was given to Modon personnel at the end of the second quarter of Year Three and discussed in detail with them.
		Preparation works for the installation of source meters began at the end of the fourth quarter of Year Three, and installation of the source meters started at the end of the third quarter of Year Four. An LWWSS engineer was on site four days/week to supervise Modon's work.
		The installation of the source meters was completed during the fourth quarter of Year Four. As per the EMMP, Modon's site supervisor was responsible for ensuring that all mitigation measures are followed and completed an environmental mitigation inspection checklist at each site. Checklists were received and reviewed by the LWWSS' ES. The checklists are included in the EMMP monitoring files.
		In addition, the LWWSS' Environmental Specialist (ES) went on site visits with the LWWSS engineer to ensure that mitigation measures are being followed. Photos are included in the EMMP monitoring files.
5.2.1-5.2.2	Jeita pump station rehabilitation	The rehabilitation was completed in the second quarter of Year Four. The BMLWE engineers have completed the environmental mitigation inspection checklists and delivered them to the LWWSS' ES during the second quarter of Year Four. Also, the commitment letter from BMLWE's DG concerning the environmental mitigation process was received. The letter and checklists are included in the EMMP monitoring files.
		During the fourth quarter of Year Four, O&M training was implemented for the pump station operators on the use of the equipment, as well as health and safety measures. In addition, an O&M manual was given to the WE.

5.2.3-5.2.4	Pump station rehabilitation in North Lebanon	This activity has been delayed and began during the second quarter of Year Four with well assessment tests. The well assessment tests were completed by the end of the fourth quarter of Year Four. The LWWSS' ES completed the ERAC and EMMP during the second quarter of Year Five and submitted them to the COR for approval.
5.3	Back-up power generators for NLWE pump stations	<p>The ERAC and EMMP were approved by LWWSS' COR during the fourth quarter of Year Three.</p> <p>The EMMP, as well as an environmental mitigation inspection checklist, was included in the subcontract with Edan Group International (signed in September 2012), the vendor that is supplying and installing the back-up generators.</p> <p>There have been two amendments to the EMMP during the second quarter of Year Four, both dealing with mitigation of the noxious exhaust from the generators. The second amendment was approved by LWWSS' COR during the second quarter of Year Four.</p> <p>The installation of the generators began in the third quarter of Year Four, and Edan Group International's site manager was ensuring that the mitigation measures were being followed at each site and completing the checklist. LWWSS engineers were also on site to monitor Edan's work. In addition, the LWWSS ES collected and reviewed the checklists, and conducted site visits to ensure that mitigation measures were being followed. The checklists are included in the EMMP monitoring files.</p> <p>During the first quarter of Year Five, the following problem was identified: Due to the small geographic area, the power generator provided by the LWWSS Program to NLWE in Beshmezzine was placed only 7 meters away from the nearest inhabited house. This would normally be in violation of environmental principles which would require a minimum of 15 meters mandatory distance between exhaust emissions and an inhabited area. One of the proposed solutions to this problem is planting trees to mitigate the negative environmental impact.</p> <p>A memo was sent to NLWE DG requesting a commitment letter agreeing to dispose of the equipment in an environmentally responsible manner at the end of the useful life of the equipment. LWWSS has received a positive response. Both the memo and the response can be found in the EMMP monitoring files.</p>
5.4	Upgrading water analysis laboratories in SLWE and	<p>-The ERAC and EMMP for the Year Three activities in SLWE and BWE were approved by LWWSS' COR during the second quarter of Year Three.</p> <p>-The ERAC and EMMP for the Year Four activity with BWE were completed in the</p>

	BWE (Y3) and rehabilitation and equipment procurement in BWE (Y4)	second quarter of Year Four.
		LWWSS' capacity building specialist and engineers conducted frequent site visits to the laboratories throughout Year Three to ensure that all mitigation measures were followed and reported back to the ES. In addition, they took photos for documentation. The ES also conducted a couple of site visits to both SLWE and BWE and found that all mitigation measures were being followed.
		As per the EMMP, both the SLWE DG and the BWE DG signed commitment letters agreeing to follow detailed safety procedures during use of the equipment and to dispose of laboratory equipment in an environmentally responsible manner at the end-of-useful life of the equipment.
		The ERAC and EMMP for the Year Four activity with BWE was completed in the second quarter of Year Four and sent to the COR. The EMMP was revised in the third quarter after having identified with the BWE Head of Laboratories and AUB an adequate microbiological waste disposal, and after having designated a solid waste landfill. The ERAC and EMMP were sent to the COR in the third quarter for approval.
		During the fourth quarter, the ERAC and EMMP were approved by COR. However, another modification included the waterproofing task due to the extension of the scope of the lab rehabilitation (based on the DG request). The final ERAC and EMMP were approved at the end of the fourth quarter of Year Four. In addition, the DG signed a commitment letter to abide by safety measures and to dispose of laboratory equipment in an environmentally responsible manner, including disposal of microbiological waste after incineration. The commitment letter can be found in the EMMP monitoring files.
		The LWWSS ES coordinated with Sanabel regarding the mitigation measures, and conducted site visits to the lab during rehabilitation and waterproofing works to ensure that mitigation measures are being followed. Photos can be found in the EMMP monitoring files.
		A training was conducted on water quality monitoring during the second quarter of Year Four, and another one will be conducted in the second quarter of Year Five on the use of the equipment, and health and safety measures.
5.5	Customer Service Center in BWE	The ERAC and EMMP were approved by LWWSS' COR during the third quarter of Year Three.
		Rehabilitation - The contractor ensured that all mitigation measures were followed, and completed an environmental mitigation inspection checklist and turned this into the ES. LWWSS' Customer Service Specialist conducted frequent site visits during the rehabilitation and reported back to the ES, as well as taking photos for documentation. All photos are included in the EMMP monitoring files.

		Operation - As per the EMMP, the BWE DG signed a commitment letter to follow the mitigation measures during operation. The ES also conducted a couple site visits to the customer service center during operation to ensure that these measures are being followed and took photos for documentation. All photos are included in the EMMP monitoring files.
5.6	Upgrade IT equipment in BWE	The ERAC and EMMP were approved by LWWSS' COR during the second quarter of Year Three. As per the EMMP, the BWE DG signed a commitment letter agreeing to dispose of IT equipment in an environmentally responsible manner at the end-of-useful life of the equipment.
	Upgrade IT equipment in SLWE	The ERAC and EMMP for SLWE were approved by LWWSS' COR during the second quarter of Year Four. As per the EMMP, the SLWE DG signed a commitment letter agreeing to dispose of IT equipment in an environmentally responsible manner at the end-of-useful life of the equipment. The letter is included in the EMMP monitoring files.
5.7	GNSS procurement and training for SLWE	The ERAC and EMMP were approved by LWWSS' COR during the second quarter of Year Three.
		As per the EMMP, the SLWE DG signed a commitment letter agreeing to dispose of the GNSS equipment in an environmentally responsible manner at the end-of-useful life of the equipment.
6.1	Network rehabilitation in Zahle (BWE)	The ERAC and EMMP were submitted to the LWWSS COR at the end of the fourth quarter of Year Three and were approved during the first quarter of Year Four.
		Environmental compliance language was included in the subcontract with WET, the contractor that is designing and supervising the network rehabilitation.
		The EMMP was developed after the preliminary design was submitted by WET and WET was given the EMMP and the environmental mitigation inspection checklist developed by LWWSS' ES.
		The EMMP was included in the subcontract with the construction subcontractor, who will be responsible for following mitigation measures during the rehabilitation. WET will be responsible for monitoring the construction subcontractor and will fill out the checklists and turn them in with monthly reports.
		The rehabilitation began on May 27, 2103, in the third quarter of Year Four. The LWWSS ES coordinated with WET to receive the checklists. The LWWSS' ES conducted site visits during the fourth quarter to ensure that all mitigation measures were being followed.

		In Q1 the contractor filled out the checklists and turned them in with the monthly reports. Constant monitoring and follow up on Environmental mitigation measures was being done by the subcontractor in coordination with the site supervisor and the ES.
6.2	Expanding service provision in Beit Mellat (NLWE)	This activity began during Year Four. LWWSS' ES completed the ERAC and EMMP during the first quarter of Year Five, after the subcontractor has completed the design. The ERAC and EMMP were submitted to the COR for approval.
6.3	Pump station rehabilitation in South Lebanon	<p>This activity began during Year Four. The LWWSS ES completed the ERAC and EMMP during the second quarter of Year Four when the final design was completed by CDM Smith and their subcontractor Design Engineering Partners (DEP). As per the EMMP, the SLWE DG signed a commitment letter agreeing to dispose of excavation waste and decommissioned equipment at the Ras Al Ain landfill.</p> <p>The ERAC and EMMP were submitted to LWWSS COR during the second quarter of Year Four and approved in the fourth quarter of Year Four.</p> <p>During the fourth quarter, the EMMP was shared with subcontractor, and the checklist was shared the LWWSS site supervisor. The LWWSS ES will go on site visits once rehabilitation begins.</p> <p>In Q1, Inspection checklists were filled by the site supervisor. Environmental site visits are planned for Q2. Constant monitoring and follow up on Environmental mitigation measures was being done by the subcontractor in coordination with the site supervisor and the ES.</p>
6.4	Chlorination systems installation and training	<p>The ERAC and EMMP were approved by LWWSS' COR during the first quarter of Year Three.</p> <p>LWWSS' capacity building specialist and engineers conducted frequent site visits to chlorination sites throughout Year Three to ensure that all mitigation measures were followed and reported back to the ES, as well as taking photos for documentation. Photos are included in the EMMP monitoring files.</p>

ERAC = Environmental Review and Assessment Checklist

EMMP = Environmental Mitigation and Monitoring Plan

ES = LWWSS Environmental Specialist